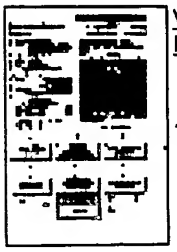
Title: **JP10021933A2: ELECTRODE OF SOLID OXIDE FUEL CELL AND ITS FORMING METHOD**

Derwent Title: Electrolyte of solid state oxide fuel cell - has nickel-YSZ cermet fuel pole whose YSZ content is raised, towards substrate side [Derwent Record]



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Country: JP Japan
Kind: A

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Application Number: **JP1996000169247**

IPC Code: **H01M 4/86;** C23C 14/08; C23C 14/22; H01M 4/88; H01M 8/02;

Priority Number: 1996-06-28 **JP1996000169247**

Abstract: PROBLEM TO BE SOLVED: To provide the electrode of a solid oxide fuel cell which never exfoliates from the electrolyte even if it receives heavy thermal load, and its making method.

SOLUTION: This electrode has such a composition that the content of YSZ increases as it moves toward a substrate 1, by decreasing the deposition speed of a YSZ deposition flow 11a and increasing the deposition speed of an NI deposition flow 12a gradually, when forming the fuel electrode 2 of the cermet consisting of Ni/YSZ on the surface of the substrate 1, by depositing the deposition flow 11a of YSZ 11 and the deposition flow 12a of Ni12 to the substrate (electrolyte) 1 consisting of YSZ by means of an electron beam depositor 21. On the other hand, when performing the above deposition, the thermal expansion coefficient of the fuel electrode 2 is approximated more to the substrate 1, the more it goes to the side of the substrate 1, and also the coupling force between the interfaces of the substrate 1 and to the fuel electrode 2 is strengthened, by applying an Ar ion beam 13 toward the substrate 1 form an ion gun 22 thereby mixing the surface between the substrate 1 and the fuel electrode 2 from the action of Ar+ large in radius of an atom, when performing the above deposition.

Family: None

Forward References: **Go to Result Set:** Forward references (1)

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	US6080283	2000-06-27	Ray; Robert E.	Eveready Battery Company, Inc.	Plasma treatment for metal oxide electrodes

Other Abstract Info: CHEMABS 128(12)143132S CHEMABS 128(12)143132S DERABS C1998-182366 DERABS C1998-182366

JP Patent Abstract, vol. 1998, no. 5, JP 10021933

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011765456 **Image available** WPI Acc No: 1998-182366/
XRAM Acc No: C98-058575 XRPX Acc No: N98-144231

Electrolyte of solid state oxide fuel cell - has nickel-YSZ cer nt is raised, towards substrate side

Patent Assignee: MITSUBISHI JUKOGYO KK (MITO)
Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10021933	A	19980123	JP 96169247	A	19960628	199817 B

Priority Applications (No Type Date): JP 96169247 A 19960628
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10021933	A		4	H01M-004/86	

Abstract (Basic): JP 10021933 A

The electrode includes YSZ substrate (1) on front face of which Ni/YSZ cermet fuel pole (2) is formed. The content of YSZ in the fuel pole is raised, towards the substrate side.

ADVANTAGE - Improves operation efficiency of electrode. Enables to form electrode easily. Prevents reduction of property of electrode.

Dwg.1/2

Title Terms: ELECTROLYTIC; SOLID; STATE; OXIDE; FUEL; CELL; NICKEL; CERMET; FUEL; POLE; CONTENT; RAISE; SUBSTRATE; SIDE
Derwent Class: L03; X16
International Patent Class (Main): H01M-004/86
International Patent Class (Additional): C23C-014/08; C23C-014/22; H01M-004/88; H01M-008/02
File Segment: CPI; EPI
Manual Codes (CPI/A-N): L03-E04; L03-E04B
Manual Codes (EPI/S-X): X16-C; X16-E06